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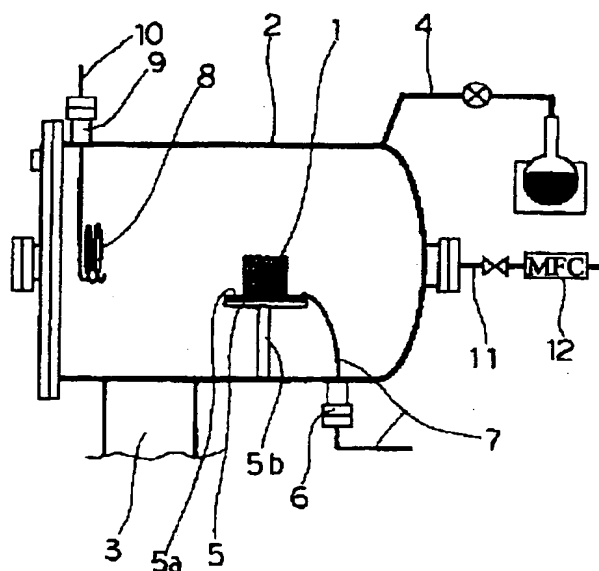
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APPLICANT : NAGASAKI PREFECTURE;

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TITLE : PRODUCTION OF PHOTOCATALYTIC
TITANIUM OXIDE FILM



ABSTRACT : PROBLEM TO BE SOLVED: To provide a photocatalytic titanium oxide film production method capable of providing high adhesion strength regardless of substances, inorganic compounds or metals and providing photocatalytic activity.

SOLUTION: A substrate 1 is fixed in a vacuum container 2 in an insulated state, and simultaneously with introduction of a gas of titanium tetraisopropoxide as the raw material gas into the vacuum container 2, the vacuum container 2 is kept in a reduced pressure state, plasma is generated by high-frequency electric discharge, positive ions in the plasma are attracted and accelerated to the substrate 1 by repeatedly applying pulsed voltage of a negative potential to the substrate 1, and simultaneously with the injection thereof, a titanium oxide film is formed on the substrate 1, and the titanium oxide film produced in such a manner is heated within a range of 400-650°C to crystallize the film and is provided with a photocatalytic activity.

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